

SPD4home User Manual

Manuel d' Installation

SIEMENS

Total Home Surge Protection

SPD4home

Surge Protection for Point-of-Entry

User Manual - USA (English)

www.usa.siemens.com/spd

Features and Benefits

- UL listed
- Rated for single phase panels up to 400 amps
- Installation flexibility
- Audible Alarm
- Internal diagnostics keep you informed
- Guaranteed lightning protection
- 10-year product warranty*

Siemens SPD4home shields motor-driven appliances in residential and light commercial applications against electrical power surge damage, including lightning, from entering through the main electrical service panel.

Multiple MOV technology with thermal disconnect to prevent catastrophic failure. The two LED lights indicate protection status. The audible alarm alerts you when protection is disrupted.

Technical Specifications

AC SURGE PROTECTION	
Thermal Fusing	Yes
Catastrophic Surge Circuit	Yes
Single Pulse Energy Dissipation	1080 Joules
Spike Capacity	40,000A
Line Voltage	120/240 1 Phase 50/60 Hz
VPR MCOV	700V
Rated Voltage	150V
Response Time	<1 nanosecond
Short Circuit Rating	25,000A
NEMA 4X Enclosure	Standard
AGENCY APPROVALS & WARRANTY	
UL/cUL Listings**	1449 SPD
Meets IEEE C62.41.1 Requirements	Yes
Product Warranty	10 Years
CATALOG NUMBER	
SPD4home	Point-of-Entry Protector

UL Model No. - TPSA9040

* See www.usa.siemens.com/spd for warranty details.

Installation Instructions:

DO NOT INSTALL DURING ACTIVE STORM CONDITIONS.

Note: It is important to keep all connecting leads as short as possible. Additionally, conductors should be twisted together for as much of the wire run as possible.

- 1. Ensure power to the panelboard has been removed.
- 2. Remove the screws securing the outer panelboard cover to the panelboard (see Figure 1).
- 3. If SPD has optional flush mount kit (FMKITC) please follow instructions provided with the SPD4Flush and then proceed to #4 in this manual.
- 4. Select the location where the SPD4home will be mounted (should be based on the internal configuration of the panelboard and the physical surroundings outside the panelboard). Note that the SPD4home's lead length must be minimized to achieve maximum performance. Once the location and threaded connection has been determined, drill or punch an appropriate size hole in the top, bottom or side surface of the panelboard. The ideal mounting location will also allow the SPD4home to be secured to the wall or panel in addition to using a chase nipple or short threaded pipe.
- 5. Push the leads from the SPD4home through the hole toward the inside of the panelboard. Secure the SPD4home to the panelboard.
- 6. If possible, to provide extra rigidity in the installation, attach the SPD4home to the wall or panel using installer supplied hardware.
- 7. Trim the leads from the SPD4home as short as possible, but still allowing the following connections to be made (see Figure 1):
 - Black wires go to the nearest free 20 Amp 2 pole circuit breaker. The phase of each lead is marked with a white band and letter designator (L1 or L2). Connect the SPD4home leads to the appropriate phases. (In all installations,

- it is not critical which black wire goes to the positions on the circuit breaker.)
 - Connect the white Neutral wire to the neutral bar using a set screw (in some applications, this connection may not be required).
 - Connect the green Ground wire to the panel-board ground.
8. Install the panelboard cover. **Note: Conducting dielectric and/or high potential testing will cause internal damage to the SPD4home unit. DO NOT perform dielectric or high potential tests with the phase or neutral SPD4home wires connected.**
9. Apply power to the panelboard. The two LEDs will illuminate on the SPD4home. If any connected phase LED on the SPD4home does not illuminate, remove power, check all connections and test again. If any connected phase LED still does not illuminate, contact Siemens Technical Support 1-888-333-3545.

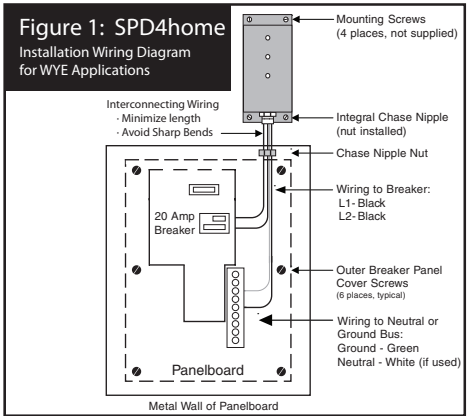
Operation

The Siemens Residential surge suppressor normally requires no remedial action. However in the event of a power anomaly or a malfunction, the operational status may change and may require action.

The table below outlines the operating conditions of the TPSA9040 and any correction action if required.

Light 1	Light 2	Alarm Red	Audible Alarm	Corrective Action
Out	Out	Out	Off	Reset Breaker if Breaker Trips Replace Unit
Green	Green			No Action
Out	Green	Blinks	Sounds	Replace Unit
Green	Out	Blinks	Sounds	Replace Unit
Green	Green	Blinks	Sounds	Check Neutral to Ground Connection before Replacing Unit

Always install the SPD4home on the load side of the main disconnect



This device features internal circuitry that will disconnect the surge protective component at the end of its useful life. Power will maintain to the load, however the load is now unprotected. Follow the manufacturer's instructions for replacing the device.

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www.usa.siemens.com/spd

Total Home Surge Protection

SPD4home

Surge Protection for Point-of-Entry

User Manual - Canada (English / Anglais)

www.purgethesurge.ca

Features and Benefits

- cUL listed
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AGENCY APPROVALS & WARRANTY	
UL/cUL Listings**	1449 SPD
Meets IEEE C62.41.1 Requirements	Yes
Product Warranty	10 Years
CATALOG NUMBER	
SPD4home	Point-of-Entry Protector

UL Model No. - TPSA9040

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Operation

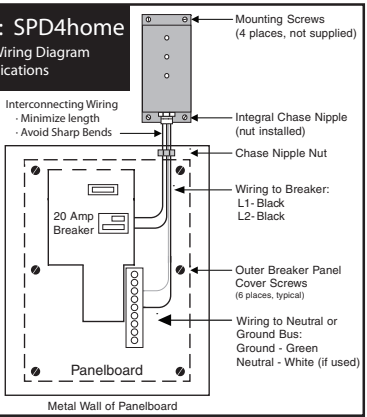
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Green	Green	Blinks	Sounds	Check Neutral to Ground Connection before Replacing Unit

Always install the SPD4home on the load side of the main disconnect

Figure 1: SPD4home Installation Wiring Diagram for WYE Applications



This device features internal circuitry that will disconnect the surge protective component at the end of its useful life. Power will maintain to the load, however the load is now unprotected. Follow the manufacturer's instructions for replacing the device.

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SPD Hotline : 1-888-333-3545
info@purgethesurge.ca

www.purgethesurge.ca

Limiteur général de surtension SPD4home

SPD4home pour tableau résidentiel

Manuel d'installation - Canada (Français/ French)

www.purgethesurge.ca

Caractéristiques et avantages

- Homologation cUL
- Capacité nominale : tableaux monophasés, maximum de 400 A
- Souplesse d'installation
- Alarme sonore
- Mode diagnostic interne pour transmission de l'information
- Protection garantie contre la foudre
- Produit garanti 10 ans*

Le suppresseur de surtensions Siemens SPD4home protège les appareils à moteur en service résidentiel ou commercial léger contre les dommages causés par les surtensions, y compris la foudre, pouvant traverser le tableau d'alimentation principal.

Dispositifs MOV (varistance à oxyde métallique) multiples, avec coupe-circuit thermique, pour éviter les défaillances catastrophiques. Deux voyants à DEL indiquent l'état de protection. L'alarme sonore prévient lorsque la protection est perturbée.

Données techniques

PROTECTION CONTRE LES SURTENSIONS C.A.	
Fusible thermique	Oui
Circuit antisurtension catastrophique	Oui
Dissipation d'énergie monoimpulsion	1080 Joules
Capacité transitoire	40,000A
Tension secteur	120/240 1 Phase 50/60 Hz
VPR MCOV	700V
Tension nominale	150V
Temps de réponse	<1 nanoseconde
Tenue au court-circuit	25,000A
Boîtier NEMA 4X	Standard
HOMOLOGATIONS ET GARANTIE	
UL/cUL Listings**	1449 SPD
Meets IEEE C62.41.1 Requirements	Oui
Product Warranty	10 ans
NUMERO DE PIÈCE	
SPD4home	Au point d'entrée

UL Model No. - TPSA9040

* See www.purgethesurge.ca for warranty details.

Instructions d'installation

NE PAS INSTALLER PENDANT UN ORAGE.

Remarque : Il est important que tous les fils de connexion soient aussi courts que possible. De plus, les conducteurs doivent être torsadés sur tout leur parcours, si possible.

1. S'assurer que l'alimentation du tableau a été coupée.
2. Retirer les vis de fixation du couvercle du tableau (v. Ill. 1).
3. Si vous allez installer un montage encastré (optionnel) veuillez suivre les instructions du manuel qui est fourni avec le FMK1TC. Ensuite veuillez procéder au #4 de ce manuel.
4. Choisir l'endroit où le SPD4home sera installé (selon la configuration des composants internes du tableau et celle des éléments qui l'entourent). Noter que la longueur des fils de connexion du SPD4home doit être réduite au minimum pour obtenir un rendement maximum. Après avoir déterminé l'endroit d'installation et le mamelon de traversée de cloison installé, percer ou découper un trou d'une taille appropriée au dessus, au dessous, ou sur un côté du tableau. L'emplacement idéal de montage permettra de fixer le SPD4home au mur ou au tableau, en plus d'un mamelon de traversée de cloison ou un équivalent.
5. Passer les fils du SPD4home dans le trou vers l'intérieur du tableau. Fixer le SPD4home au tableau.
6. Si possible, afin de rendre l'installation plus rigide, fixer le SPD4home au mur ou au tableau à l'aide du matériel fourni
7. Raccourcir le plus possible les fils du SPD4home, tout en permettant les connexions suivantes (v. Ill. 1).
 - Les fils noirs se raccordent au coupe-circuit bipolaire de 20 A libre le plus près. La phase de chaque fil est indiquée par une bande blanche et un code (L1 ou L2). Brancher les fils du SPD4home aux phases qui conviennent (l'un ou l'autre des fils noirs peut être raccordé à l'une ou l'autre des bornes du coupe-circuit).

- Connecter le conducteur neutre blanc à la barre neutre au moyen d'une vis de blocage (cette connexion n'est pas nécessaire dans certaines installations).
 - Raccorder le conducteur de masse vert à la masse du tableau.
8. Poser le couvercle du tableau. **Note : L'exécution d'essais diélectriques endommagera le SPD4home. NE PAS effectuer d'essais diélectriques lorsque les conducteurs de phase ou neutres du SPD4home sont connectés.**
 9. Réaligner le tableau. Les deux voyants à DEL du SPD4home s'allumeront. Si l'un ou l'autre des voyants de phase à DEL du SPD4home ne s'allume pas, couper l'alimentation, vérifier tous les branchements et réessayer. Si, de nouveau, l'un ou l'autre des voyants de phase à DEL ne s'allume pas, communiquer avec le service d'assistance Siemens au 1-888-333-3545.

Operación

El supresor de sobretensiones Siemens Residencial normalmente no requiere ninguna acción correctiva. Sin embargo, en el caso de una anomalía de potencia o un mal funcionamiento, el estado operativo puede cambiar y puede requerir una acción preventiva.

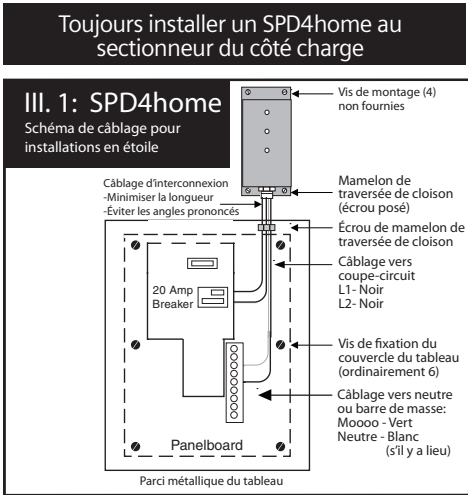
El siguiente cuadro muestra las condiciones de funcionamiento del TPSA9040 y cualquier acción correctiva si es necesario.

Luz 1	Luz 2	Alarma Rojo	Alarma Audible	Acción Correctiva
Apagado	Apagado	Apagado	Apagado	Resetear el interruptor, si falla, cambie la unidad
Verde	Verde			No acción
Apagado	Verde	Parpadeo	Sonidos	Reemplazar la unidad
Verde	Apagado	Parpadeo	Sonidos	Reemplazar la unidad
Verde	Verde	Parpadeo	Sonidos	Revise la conexión del neutro a tierra, antes de reemplazar la unidad

Este dispositivo cuenta con un circuito interno que desconectará el componente de protección contra sobretensiones al final de su vida útil. La Potencia se mantendrá en la carga, sin embargo, la carga se encontrará sin protección. Siga las instrucciones del fabricante para la sustitución del dispositivo.

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